

ATTACHMENT A
R marks

This is applicants' response to the Official Action dated December 12, 2003. For the reasons given below, it is respectfully submitted that the present application is in condition for allowance and favorable action is solicited.

A new Abstract and formal drawings have been submitted as required by the Official Action.

This application now contains only claims 13-27 directed to applicants' new and inventive methods and apparatus for closing a tank opening. The earlier claims 1-15 have been cancelled without prejudice. The Official Action dated December 12, 2003, is premised upon several substantial errors in relation to the presently-claimed subject matter. First, it rejects the claims of the present application based upon the Duhaime et al. patent as a base reference. However, the teachings of this reference have been clearly misinterpreted including the assumption of certain subject matter as "engineering design". Indeed, the base reference actually instructs the ordinary worker in the art to take steps contrary to the presently-claimed inventions. Second, the Official Action clearly errs in reliance upon the secondary reference to Hyde et al. which, even if combined with the base reference (on a hypothetical basis), does not show that applicants' claims are obvious.

In view of these errors and others discussed in more detail below, Applicants respectfully request reconsideration and allowance of claims 13-27.

I. THE REJECTIONS UNDER §103 ARE IN ERROR

Original claims 1-2, 5-7 and 11-12 were rejected in the Official Action under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 5,425,470 to Duhaime et al. ("Duhaime").

Original claims 3-4 and 8-10 were rejected under 35 U.S.C. §103 as being unpatentable over Duhaime in view of Hyde et al., U.S. Patent No. 5,139,043 ("Hyde").

The MPEP §2141 states:

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Office policy is to follow *Graham v. John Deere Co.* in the consideration and determination of obviousness under 35 U.S.C. 103. As quoted above, the four factual inquiries enunciated therein as a background for determining obviousness are as follows:

- (A) Determining the scope and contents of the prior art;
- (B) Ascertaining the differences between the prior art and the claims in issue;
- (C) Resolving the level of ordinary skill in the pertinent art; and
- (D) Evaluating evidence of secondary considerations.

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A. The Scope And Content Of The Prior Art

The Duhaime patent is directed to a permeation-resistant closure for a multilayer fuel tank. An opening in the fuel tank caused by the blow pin during manufacture is filled with a closure plug having a specific spacial alignment with the barrier layer of the multilayer fuel tank wall. All of the embodiments of the Duhaime patent expressly involve the spacial alignment of the barrier layers in the wall and the plug, respectively, as well as spacial alignment of the outer layer and the inner layer of the plug and wall, respectively. Further, in addition to the spacial arrangements, the layers are welded to one another to form an uninterrupted permeation-resistant barrier surface.

The Duhaime patent specifically teaches that the edge of the opening in the wall of the fuel tank should be welded to the layers of the plug so that the edge is not

susceptible to degradation by the contents of the tank. Thus, at column 1, lines 39 though 42, Duhaime states:

The edge contains the interface between the barrier and the inner and outer layers. Exposure to fuel may degrade the cohesiveness of the multilayer wall.

The Duhaime patent repeatedly stresses that the wall barrier layer and the closure plug barrier layer form an uninterrupted and integral surface to resist permeation in the vicinity of the closure. Thus, at column 1, lines 60 et seq., the patent states:

* * * * *

The wall barrier and the closure plug barrier layer form an uninterrupted and integral surface resisting permeation in the vicinity of the closure.

The invention also seals the interfacial fuel tank wall surface. Both the inner and outer layers of the fuel tank wall are welded to the inner and outer layers of the barrier plug. This facilitates closure of a fuel tank having inner and outer walls made of different material.

* * * * *

Further in the description of a preferred embodiment, Duhaime describes the desired structure as follows:

* * * * *

Surfaces 38, 50 [Fig. 3] are welded so that the similar materials of the wall 12 and closure plug 42 weld and fuse to one another to form an integral and uninterrupted surface. Outer layer 20 welds to outer layer 46. Inner layer 22 welds to inner layer 44. Barrier layer 24 weld(sic) to barrier layer 48. (See Column 2, lines 63 et seq.)

As illustrated in Fig. 5 of the Duhaime patent, a second described embodiment involves a different orientation of the interfacial boundaries between the different layers of the plug and the tank wall. As described in the patent, column 3, lines 34 et seq., the plug-opening arrangement is as follows:

* * * * *

Opening 30 is formed within wall 18'. Plug 42' is inserted within opening 30. Second surface 50' mates with and seals to first surface 38'. First and second surfaces 38', 50' do not include the interfacial boundary of the different layers. The interfacial boundaries occur at interface 56. While possible, it is more difficult to weld together the inner, outer and barrier layers of wall 18' and closure plug 42'.

* * * * *

The disclosure of the Duhaime patent has further emphasis of the particular spacial arrangement of the closure plug and the tank wall. Thus, in claim 1, the patentee describes the spacial relationship as follows:

...Said closure plug having polymeric inner and outer layers and a barrier layer therebetween welded to said wall, said barrier layer of said closure plug is linearly aligned with and juxtaposed (with) said barrier layer of said wall, whereby said wall barrier layer and said closure plug barrier layer form an uninterrupted integral surface in the vicinity of the closure.

Furthermore, independent claim 5 similarly emphasizes that the barrier layer in the wall and in the closure form an uninterrupted integral surface in the vicinity of the closure plug (see column 4, lines 46 et seq).

It is apparent that the Duhaime patent teaches providing its closure plugs in a location on the fuel tank wall that corresponds to the inherent manufacturing defect caused by a blow pin which serves to inflate the parison during blow molding operation. Thus, at column 2, lines 41 et seq., the patent describes this situation as follows:

* * * * *

Wall 18 is formed into a protrusion 26. Protrusion 26 has a generally U-shaped cross section. Blow pin 28 is inserted through protrusion 26. Blow pin serves to inflate the parison during the molding operation. After wall 18 has cooled, blow pin 28 is withdrawn and fuel tank 12 is removed from apparatus 10.

As shown in Fig. 2, the blow pin forms an irregularly shaped punctured opening 30 within protrusion 26. Protrusion 26 is severed by knives 32. End 34 is removed and discarded. An outwardly extending nipple 36 receives a closure plug.

* * * * *

This attempt to plug a necessary hole formed during the manufacture of the fuel tank is contrasted in the Duhaime patent to the normal openings that are formed in a fuel tank for receiving items such as the fuel delivery module, filler pipe and sensing tube. Thus, at column 1, line 24 et seq., the Duhaime patent describes the desired openings other than the plugged blow pin opening, thusly:

Various openings are formed in the fuel tank for receiving items such as the fuel delivery module, filler pipe and sensing tube. It is desirable to place these openings in an area that is punctured by a blow pin during the manufacturing process. It is not always possible to align the desired openings with the puncture. These punctures are generally closed by means of a plug. The puncture is machined into a smooth surface that receives a closure plug. Closure plugs are generally welded to the exterior surface of the fuel tank wall.

In sum, a careful review of the disclosure of the Duhaime patent reveals that it is directed to forming a plug for an irregular blow pin hole that is formed during the manufacturing operation and is different than the opening intentionally formed for the insertion of items such as the fuel delivery module, etc. It is abundantly clear that the opening which is closed by the multilayer plug is not intended to receive and mount any useful items such as the fuel delivery module, filler pipe and sensing tube.

Turning to the Hyde patent disclosure, it relates to a vapor vent valve used in combination with a fuel tank employed in an automotive vehicle. More particularly, the patent discloses a vapor vent valve capable of being welded directly onto a polymeric fuel tank in an automotive vehicle.

The Hyde patent discloses two embodiments of a vapor vent valve welded to the outer surface of the fuel tank. Thus, in Fig. 2, the valve 10 includes connecting means 60 integral with the lower portion 14 of the main body casing 12. The connecting means

60 serves to weldably connect the valve 10 to the polymeric fuel tank 50. The connecting means as shown in Fig. 2 comprising a single L-shaped flange which extends out from and encircles lower portion 14 to define a circumferential weld foot 62. The patent discloses that the weld foot 62 is made from the same polymeric material as the fuel tank 50 (viz. polyethylene) in order to ensure that a strong cohesive bond is created between the two when they are welded together. As disclosed in column 7, beginning at line 34 et seq., the weld foot 62 is welded to the fuel tank 50 by employing heat from a variety of sources. A heated platen is disclosed which heats up valve 10 and surface 54 on tank 50 and then they are pressed together to create a weld bead. Alternately, the weld foot 62 and the fuel tank 50 may be welded together by any welding process known in the art such as an ultrasonic welding process. See line 47 et seq.

Hyde's Fig. 4 discloses another embodiment wherein the valve casing and connecting means 60b each comprise a first portion formed from a first polymer material and a second portion formed from a second polymeric material. Preferably, the first polymeric material used to form the first portion 72 and 74 of the valve 10 is the same material used to form the fuel tank 50. The patent describes that it is preferred to employ the same polymeric material (viz. polyethylene) for both parts in order to ensure that a strong weld is made between the connecting means 60b and the fuel tank 50. However, as seen in Fig. 4, portions 76 and 78 of valve 10 are made from a second polymeric material and it is preferably a heat and fuel resistant polymeric material such as nylon. Hyde describes that, while most grades of polyethylene will begin to deform under load at about 180°F, most grades of nylon will not begin to deform under load

unless placed in an environment having a temperature above 400°F. See Col. 8, lines 46 et seq. The patent points out that, because of this difference in melting point, the polyethylene first portion 72 and 74 of the valve 20 may be injection molded about the second portion 76 and 78 without the latter portions being damaged by heated polyethylene. Further, by employing nylon instead of polyethylene for the second portion 76 of the main body casing 12a, the strength of the connection between the first end 16 of the lower portion 14 and the end wall 22 will be ensured even if the temperature in the tank 50 increases. Further, as shown in Fig. 4, the inner portion 68 of the weld foot 62b is formed as a continuous extension of the lower portion 14a. When connecting means 60b is welded onto the fuel tank 50, a weld will form between the nylon inner portion 68 of the weld foot 62b and the tank 50. This weld serves to prevent fuel in the tank 50 from reaching the interface 80 between the first and second portions of valve 10. The weld formed between the inner portion 68 of the weld foot 62b and the tank 50 prevents fuel from reaching the interface 80. Hyde notes that if fuel or vapor should happen to reach the interface 80, they will be trapped in the interface or will be vented to the conduit 85.

In summary, it is apparent that the Hyde patent does not disclose a multilayer fuel tank wall and a multilayer plate closing an opening in the wall wherein the composition of the superimposed layers is such that they can be heat welded and the permeation resistant barrier of the tank wall and the plate are intentionally misaligned and do not form an uninterrupted permeation-resistant barrier. Further, in the embodiment of the Hyde patent that utilizes two materials to make the valve 10 (e.g., polyethylene and nylon) the attachment disclosed between the two-layer valve body and

the polyethylene wall of the fuel tank is one of welding the two sandwiched materials into the surface of the polyethylene tank surface.

B. The Differences Between The Prior Art And The Claims At Issue

1. The Applicable Law:

MPEP §2141.02 describes the PTO procedure concerning differences between the prior art and the claimed invention.

In part, it states:

In determining the differences between the prior art and the claims, the question under 35 U.S.C. §103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983).

Furthermore, the MPEP points out that it is error to distill a claimed invention down to a "gist" or "thrust". MPEP §2141.02 states the following:

Distilling an invention down to the "gist" or "thrust" of an invention disregards the requirement of analyzing the subject matter "as a whole." *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984) (restricting consideration of the claims to a 10% per second rate of stretching of unsintered PTFE and disregarding other limitations resulted in treating the claims as though they read differently than allowed).

2. The Duhaime and Hyde Patents:

The newly-presented claims define structures and steps which are not taught nor made obvious by the teachings of Duhaime and/or Hyde for numerous reasons including, inter alia, the following.

The Duhaime patent does not teach or suggest a system for sealing an opening of a plastic tank having a multilayer wall structure including at least one internal barrier layer and a plastic plate welded to the wall of the tank in the location of the periphery of

the opening wherein the plastic plate also is a multilayer structure including at least one layer of high density polyethylene and at least one internal barrier layer and wherein, at the location where the external layer of said plate is welded to the layer constituting the external wall of the tank, the plate and the wall of the tank are superimposed so that the number of superimposed layers in this location equals the sum of the number of layers in the plate and the number of layers in the wall of the tank and so that the barrier layer of the plate is not in continuity with the barrier layer of the tank wall.

Further, as described above, the Duhaime patent relates to the plugs for openings created in the tank wall as a byproduct of the manufacturing process. Accordingly, Duhaime does not teach a system having a structure where the closure plate does not pass through the wall of the tank (new claim 14). Furthermore, Duhaime does not teach the claimed structure (new claim 16) wherein the plate is equipped with a conduit that does not pass through the plate. Moreover, the Duhaime reference teaches that the plug is not intended to provide any type of base or opening for an additional item such as a conduit and seal as recited in claim 17.

Furthermore, for the same reasons, Duhaime does not teach attachment to the plate of at least one accessory located on the side of the plate inside the tank (new claim 18). As noted above, Duhaime merely teaches a simple plug in a wall and intends other openings for the mounting of accessories.

Furthermore, for the same reasons Duhaime does not teach that an accessory mounted internally in the tank on the claimed system is a liquid-vapor separator comprising a vapor escape conduit that passes through the plate by way of a hole (new claim 19).

Moreover, Duhaime does not teach the making of a sealing plate by using two complete multilayer wall plates stacked on top of each other which plates have the same structure as the multilayers of the tank wall (new claim 20).

Finally, the Duhaime patent does not teach the use of mounting pins on the exterior wall of the tank in the vicinity of the opening (new claim 21).

For similar reasons, the Duhaime reference differs substantially from the methods claimed in claims 22-27. Further, Duhaime does not teach a method wherein an accessory is attached by welding to the opening closing plate inside the tank (new claim 23). Further, Duhaime does not teach welding at least one accessory to the plate prior to sealing the opening of the tank by welding the plate carrying the accessory to the periphery of the opening (new claim 24). Further, Duhaime does not teach providing at least one accessory attached to the internal wall of the tank adjacent to the opening prior to sealing the tank by simultaneously welding the plate to the accessory and to the periphery of the opening (new claim 25).

Moreover, Duhaime fails to teach a method wherein the wall of the tank is supported in the vicinity of the opening during the operation for welding the plate adjacent to the opening by means of pins molded onto the outer surface of the wall (new claim 26).

In sum, the Duhaime patent differs substantially in structure, function, operation and steps from the application claims. As such, the Duhaime patent is clearly insufficient as a base reference for any rejection of the presently-submitted claims.

3. The Hyde Patent:

There are substantial differences between applicants' presently-claimed subject matter and the disclosure in the Hyde patent. The differences are numerous and include, inter alia, the following:

a. The Hyde patent does not use a multilayer structure including an internal barrier layer in either the wall of the tank or the plastic plate for closing an opening in the tank.

b. The Hyde patent does not teach or suggest a multilayer tank having a plastic plate welded to the periphery of an opening in the tank wherein the external layer of the plate is welded to the layer constituting the external wall of the tank and the plate and the wall of the tank are superimposed so that the number of superimposed layers in this location equals the sum of the number of layers in the plate and the number layers in the wall of the tank and wherein the barrier layer of the plate is not in continuity with the barrier layer of the tank. This structure is required in all of the apparatus and method claims presently provided.

c. Even if it is assumed (hypothetically) that the vapor vent valve of the Hyde patent was welded in the opening of the Duhaime patent, the assumed structure does not meet the apparatus or method claims now pending. For example, the hypothetical apparatus is different in that it does not teach non-aligned and non-integral permeation-resistant barrier layers as specifically recited in all of the presently pending claims. In sum, there is simply no teaching of a multilayer plate welded the wall of a multilayer tank and that the plate and the tank when superimposed have the number of superimposed layers which equal the sum of the number of layers in the plate and the

number of layers in the wall of the tank and the barrier layer of both the plate and the barrier layer of the tank are not in continuity with one another.

4. The Claims Define Subject Matter Not Taught By The References

As made clear by the discussions in subparagraphs 1-3 above, the presently-pending claims define subject matter not taught by the references combined by the Examiner, whether they are looked at singly or in combination. The combination of references is clearly deficient to teach the structure of the plastic plate and the tank wall as specifically recited in all of applicants' claims.

At page 3 of the Official Action, it is asserted that: "...regarding the features specified in claims 5, 6 and 11, these features would have been obvious matter of engineering design since applicant asserts no criticality in these particular features." However, this assertion and the cited references do not provide a sufficient reason to modify the base reference as suggested by the Examiner's Official Action.¹

First, it should be apparent that no reference teaches a plate having at least six layers as defined by original claim 5 and newly-presented claim 5. Furthermore, neither of the references teach or suggest the use of mounting pins on the exterior wall of the tank in the vicinity of the opening. The references of record are devoid of such a

¹ MPEP §2144.03 discusses the question of the establishment of "well known" prior art. This section states:

If justified, the examiner should not be obliged to spend time to produce documentary proof. If the knowledge is of such notorious character that official notice can be taken, it is sufficient so to state. *In re Malcolm*, 129 F.2d 529, 54 USPQ 235 (CCPA 1942). If the applicant traverses such an assertion, the examiner should cite a reference in support of his or her position.

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If applicant does not seasonably traverse the well known statement during examination, then the object of the well known statement is taken to be admitted prior art. *In re Chevenard*, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes demand for evidence made as soon as practicable during the prosecution. Thus, the applicant is charged with rebutting the well known statement in the next reply after the Office action in which the well known statement was made.

teaching and there is no evidence in the record that this is merely a matter of engineering choice. Finally, original claim 11 in method form relates to the pins molded onto the exterior of the tank wall. Just as with original claim 6, the record is devoid of any teaching of such a method step.

Since the applicants' respectfully traverse the Examiner's assertion of matters of "engineering design", the Examiner is required to produce evidence in the form of documentary proof in order to support the rejection of the presently-provided claims. See MPEP §2144.03.

C. The Level Of Ordinary Skill In The Art

MPEP §2141.03 describes the factors for the PTO to consider in determining the level of ordinary skill.

MPEP §2141.03 states:

"Factors that may be considered in determining level of ordinary skill in the art include (1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field." *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 696, 218 USPQ 865, 868 (Fed. Cir. 1983), *cert. denied*, 464 U.S. 1043 (1984).

§2141.03 goes on to state:

If the only facts of record pertaining to the level of skill in the art are found within the prior art of record, the court has held that an invention may be held to have been obvious without a specific finding of a particular level of skill where the prior art itself reflects an appropriate level. *Chore-Time Equipment, Inc. v. Cumberland Corp.*, 713 F.2d 774, 218 USPQ 673 (Fed. Cir. 1983).

D. The Non-Obviousness Of The Present Claims

MPEP §2142 describes the requirements for a *prima facie* case of obviousness. Thus, §2142 states:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on the applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

MPEP §2143.01 is the requirement that the prior art must suggest the desirability of the claimed invention. Thus, §2143.01 states:

"There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art." *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998) (The combination of the references taught every element of the claimed invention, however, without a motivation to combine, a rejection based on a *prima facie* case of obviousness was held improper.)

* * *

The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art, and all teachings in the prior art must be considered to the extent that they are in analogous arts. Where the teachings or two or more prior art references conflict, the examiner must weigh the power of each reference to suggest solutions to one of ordinary skill in the art, considering the degree to which one reference might accurately discredit another. *In re Young*, 927 F.2d 588, 18 USPQ.2d 1089 (Fed. Cir. 1991) (Prior art patent to Carlisle disclosed controlling and minimizing bubble oscillation for chemical explosives used in marine seismic exploration by spacing seismic sources close enough to allow the bubbles to intersect before reaching their maximum radius so the secondary pressure pulse was reduced. An article published several years later by Knudsen opined that the Carlisle technique does not yield appreciable improvement in bubble oscillation suppression. However, the article did not test the Carlisle technique under the comparable conditions because Knudsen did not use Carlisle spacing or seismic source. Furthermore, where the Knudsen model most closely approximated the patent technique, there was a 30% reduction of the secondary pressure pulse. On these facts, the court that the Knudsen article would not have deterred one of ordinary skill in the art from using the Carlisle patent teachings.)

§2143.01 also discusses the fact that even if references can be combined or modified that is not sufficient to establish a prima facie case of obviousness. Thus, §2143.01 states:

The mere fact that the references can be combined or modified does not render the resultant combination obvious unless the prior art also suggested desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). (Emphasis added.)

§2143.01 also discusses how the proposed modification of a reference cannot render the prior art unsatisfactory for its intended purpose. Thus, §2143.01 states:

If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

MPEP §2143.03 discusses how all claim limitations must be taught or suggested. Thus, §2143.03 states:

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). All words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

It is respectfully submitted that the Examiner's purported combination of references is based upon improper hindsight and uses the disclosure of applicants' present application as a "blue print" rather than citing pertinent prior art. Such a hindsight analysis is forbidden. See Ruiz v. A.B. Chance Co., 234 F.3d 654 at 664 (Fed. Cir. 2000) ("In order to prevent a hindsight-based obviousness analysis, we have clearly established that the relevant inquiry...is whether there is a reason, suggestion or motivation in the prior art or elsewhere that would have led one of ordinary skill in the art to combine the references."); Ecolchem, Inc. v. Southern California Edison, Co., 227

F.3d 1361, 1371 (Fed. Cir. 2000) (same), cert. denied, 532 U.S. 974 (2001); In re Dembiczak, 175 F.3d 994 at 999 (Fed. Cir. 1999) (same); In re Rouffet, 149 F.3d 1350 at 1359 (Fed. Cir. 1998) (same). As discussed herein, the purported combination of references in the Official Action is based upon improper hindsight and utilizes the applicant's present teachings rather than any specific appropriate prior art. As noted above, such hindsight combinations by the PTO and District Courts have been reversed by the Federal Circuit Court of Appeals.

MPEP §2141.02 also makes it clear that all prior art must be considered in its entirety, including disclosures that teach away from the claimed subject matter. Thus, the MPEP states:

A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984) (Claims were directed to a process of producing a porous article by expanding shaped, unsintered, highly crystalline poly tetrafluoroethylene (PTFE) by stretching said PTFE at a 10% per second rate to more than five times the original length. The prior art teachings with regard to unsintered PTFE indicated that the material does not respond to conventional plastics processing, and the material should be stretched slowly. A reference teaching rapid stretching of conventional plastic polypropylene with reduced crystallinity combined with a reference teaching stretching unsintered PTFE would not suggest rapid stretching of highly crystalline PTFE, in light of the disclosures in the art that teach away from the invention, i.e., that the conventional polypropylene should have reduced crystallinity before stretching, and that PTFE should be stretched slowly.

Likewise, the Examiner is required to provide documentary evidence regarding the subject matter of original claims 9 and 10 to prove that the specific method of welding recited therein was “an obvious matter of engineering design”. The subject matter of original claim 9 is now recited in presently-provided claim 24. Further, the subject matter of original claim 10 is now found in presently provided claim 25.

II. **SUMMARY AND CONCLUSION**

In view of the above remarks, which reveal substantial deficiencies in the cited references, whether taken singly or in combination, it is respectfully submitted that the presently-pending claims 13-21 (apparatus) and 22-27 (method) are directed to clearly novel, unobvious and patentable subject matter.

When the Examiner takes up this response for reconsideration, it is requested that a personal interview or a telephone conference be scheduled with applicants' attorney to advance the conclusion of the prosecution of this application. The Examiner is requested to call the undersigned at (703) 739-4900 for such a conference.

Prompt favorable reconsideration and allowance is respectfully requested.